We claim:

1. A method of modulating adhesion of a target cell to a substrate, comprising providing the target cell with an adhesion modulatory peptide-associated substrate such that adhesion of the target cell to the substrate is modulated.

2. The method of claim 1, wherein the adhesion modulatory peptide comprises a peptide which specifically enhances adhesion of the target cell.

3. The method of claim 1, wherein the adhesion modulatory peptide comprises a peptide which specifically inhibits adhesion of the target cell

4. The method of claim 1, wherein the adhesion modulatory peptide is selected from the group consisting of an endothelial cell adhesion modulatory peptide, a fibroblast adhesion modulatory peptide and a macrophage adhesion modulatory peptide.

5. The method of claim 4, wherein the adhesion modulatory peptide is an endothelial cell adhesion modulatory peptide.

6. The method of claim 4, wherein the adhesion modulatory peptide is a fibroblast adhesion modulatory peptide.

7. The method of claim 4, wherein the adhesion modulatory peptide is a neotrophil adhesion modulatory peptide or a myofibroblast adhesion modulatory peptide.

8. The method of claim 1, wherein the adhesion modulatory peptide comprises an amino acid residue sequence selected from the group consisting of SDQDNNGKGSHES (SEQ ID NO:1), SDQDQDGDGHQDS (SEQ ID NO:2), GRGDNPS (SEQ ID NO:3), TPVVPTVDTYDGRGDSLAY (SEQ ID NO:4), TPVVPTVDTYDGRGD (SEQ ID NO:5), HDRKEFAKFEEERARA (SEQ ID

NO:10), DPGYIGSR (SEQ ID NO:10), KGMNYTVR (SEQ ID NO:13), and VLEP (SEQ ID NO:15).

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9. The method of claim 1, wherein the adhesion modulatory peptide comprises an amino acid residue sequence selected from the group consisting of DDDRKWGFC (SEQ ID NO:6), DSVVYGLRSK (SEQ ID NO:7), LDSAS (SEQ ID NO:8), SDV (SEQ ID NO:9), PNGRGESLAY (SEQ ID NO:11), and DRYLKFRPV (SEQ ID NO:12).

10. The method of claim 1, wherein the adhesion modulatory molecule enhances binding of an adhesion receptor predominantly expressed by the target cell.

11. The method of claim 1, wherein the adhesion modulatory molecule inhibits binding of an adhesion receptor predominantly expressed by the target cell.

12. The method of claim 1, wherein the target cell is selected from the group consisting of an endothelial cell, a fibroblast and a macrophage.

13. The method of claim 12, wherein the target cell is an endothelial cell.

14. The method of claim 12, wherein the target cell is a fibroblast.

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15. The method of claim 1, wherein the target cell is a neutrophil or a myofiboblast.

16. The method of claim 1, wherein the target cell is within a cell population.

17. The method of claim 1, wherein the target cell is within a subject.

18. The method of claim 1, wherein the substrate is selected from the group consisting of a polyvinyl surface, a gel, collagen, hyaluronic acid, titanium and PGA.

19. The method of claim 1, further comprising contacting the substrate with the adhesion modulatory peptide, forming the adhesion modulatory peptide-associated substrate prior to providing the cell with the substrate.

20. An adhesion modulatory peptide which modulates adhesion of a target cell to a substrate.

21. The adhesion modulatory peptide of claim 20, wherein the peptide enhances adhesion of a target cell to a substrate.

22. The adhesion modulatory peptide of claim 20, wherein the peptide inhibits adhesion of a target cell to a substrate.

23. The adhesion modulatory peptide of claim 20, comprising an amino acid residue sequence selected from the group consisting of SDQDNNGKGSHES (SEQ ID NO:1), SDQDQDGDGHQDS (SEQ ID NO:2), GRGDNPS (SEQ ID NO:3), TPVVPTVDTYDGRGDSLAY (SEQ ID NO:4), TPVVPTVDTYDGRGD (SEQ ID NO:5), HDRKEFAKFEEERARA (SEQ ID NO:9), DPGYIGSR (SEQ ID NO:10), KGMNYTVR (SEQ ID NO:13) and VLEP (SEQ ID NO:15).

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24. The adhesion modulatory peptide of claim 20, comprising an amino acid residue sequence selected from the group consisting of DDDRKWGFC (SEQ ID NO:6), DSVVYGLRSK (SEQ ID NO:7), LDSAS (SEQ ID NO:8), SDV (SEQ ID NO:9), PNGRGESLAY (SEQ ID NO:12), and DRYLKFRPV (SEQ ID NO:13).

25. The adhesion modulatory peptide of claim 20 having a molecular weight less than about 2500 Da.

26. A substrate treated with the adhesion modulatory peptide of claim 20.

27. A device treated with the adhesion modulatory peptide of claim 20.

28. A composition comprising the adhesion modulatory peptide of claim 20 and a carrier suitable for *in vivo* use.

29. A device for modulation of adhesion of a target cell comprising a substrate in combination with an adhesion-modulatory peptide, forming a device for modulating adhesion.